

Title (en)

Method for selective hydrogenation of polymer containing conjugated diene

Title (de)

Verfahren zur selektiven Hydrierung von konjugierten Dienpolymeren

Title (fr)

Procédé d'hydrogénéation selective de polymères diéniques conjugués

Publication

**EP 1104774 A1 20010606 (EN)**

Application

**EP 00401970 A 20000707**

Priority

KR 19990053045 A 19991126

Abstract (en)

This invention relates to a method for the selective hydrogenation of the unsaturated double bonds in the conjugated diene units of a homopolymer or copolymer in the presence of a novel homogeneous organotitanium-based catalyst. Also, the process of this invention can demonstrate a high yield of hydrogenation and hydrogenation reproducibility using a novel catalyst, so prepared from a mixture consisting of a substituted or unsubstituted monocyclopentadienyl titanium compound expressed by the following formula 1 and lithium hydride derived from a reaction of both alkyl lithium and hydrogen in solution. In particular, this invention also relates to a novel method for the selective hydrogenation of unsaturated double bonds in the conjugated diene units of a conjugated diene polymer or copolymer, so prepared via the reaction between a conjugated diene monomer and vinyl-substituted aromatic monomer. <CHEM> wherein, R1, R2, R3, R4 and R5, which may be same or different, are selected from hydrogen atoms and alkyl groups of 1 to 5 carbon atoms; X1, X2 and X3, which may be same or different, are selected from halogen atoms.

IPC 1-7

**C08F 8/04; C08C 19/02**

IPC 8 full level

**C08F 4/46** (2006.01); **C08C 19/02** (2006.01); **C08F 8/04** (2006.01); **C08F 36/04** (2006.01); **C08K 5/01** (2006.01)

CPC (source: EP KR US)

**C08C 19/02** (2013.01 - EP US); **C08F 8/04** (2013.01 - EP US); **C08K 5/01** (2013.01 - KR)

Citation (search report)

- [PX] US 5994477 A 19991130 - KO YOUNG-HOON [KR], et al & KR 100195581 B1 19990615 - KOREA KUMHO PETROCHEM CO LTD [KR]
- [DY] US 5242986 A 19930907 - GIBLER CARMA J [US], et al
- [Y] US 5173537 A 19921222 - CHAMBERLAIN LINDA RAE [US], et al
- [PY] US 6020439 A 20000201 - KO YOUNG-HOON [KR], et al & KR 100201228 B1 19990615 - KOREA KUMHO PETROCHEM CO LTD [KR]
- [A] US 3135716 A 19640602 - URANEEK CARL A, et al
- [A] US 5910566 A 19990608 - KO YOUNG HOON [KR], et al
- [A] WO 9618655 A1 19960620 - DOW CHEMICAL CO [US], et al

Cited by

EP1435362A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

**EP 1104774 A1 20010606; EP 1104774 B1 20061018**; AT E342924 T1 20061115; DE 60031352 D1 20061130; DE 60031352 T2 20070524; JP 2001163919 A 20010619; JP 3484155 B2 20040106; KR 100348761 B1 20020813; KR 20010048370 A 20010615; US 6410657 B1 20020625

DOCDB simple family (application)

**EP 00401970 A 20000707**; AT 00401970 T 20000707; DE 60031352 T 20000707; JP 2000303679 A 20001003; KR 19990053045 A 19991126; US 64010200 A 20000815